Production of 1-butene

Abstract

Process for producing a 1-butene-containing C4-hydrocarbon stream (1-$C_4^=$ stream) from a 1-butene- and 2-butene-containing C4-hydrocarbon stream (1- and 2-$C_4^=$ feed stream) whose 1-butene content is lower than that of the 1-$C_4^=$ stream, by

a) feeding the 1- and 2-$C_4^=$ feed stream and a 1-butene- and 2-butene-containing C4-hydrocarbon stream (1- and 2-$C_4^=$ recycle stream) whose 1-butene content is lower than that of the 1-$C_4^=$ stream and which has been produced by means of step (b) below into a distillation column and taking off the 1-$C_4^=$ stream and a 2-butene-containing C4-hydrocarbon stream (2-$C_4^=$ stream) whose 1-butene content is lower than that of the 1- and 2-$C_4^=$ feed stream and of the 1- and 2-$C_4^=$ recycle stream from the distillation column (step a) and

b) producing the 1- and 2-$C_4^=$ recycle stream from the 2-$C_4^=$ stream by bringing the 2-$C_4^=$ stream into contact with an isomerization catalyst which catalyzes the conversion of 2-butenes into 1-butene in a reaction zone (step b).